

A NEW PLASTIC OPERATION FOR STRICTURE AT THE URETERO-PELVIC JUNCTION

REPORT OF 20 OPERATIONS¹

FREDERIC E. B. FOLEY

(Reprinted from *J Urol*, 38: 643–672, 1937)

INTRODUCTION

Obstruction at the uretero-pelvic junction is the sole cause of pure hydronephrosis. The hydrostatic effect of such obstruction is felt entirely above this point and produces so-called mechanical dilatation of the pelvis and calyces. In very early stages of the process there is no significant parenchymal injury, excretion is merely blocked and relief of the obstruction will be followed promptly by practically full recovery of function. If the obstruction is not relieved permanent anatomic change occurs in the renal parenchyma in the form of hydronephrotic atrophy. If neglected sufficiently long total destruction of renal parenchyma results, no degree of functional recovery is possible and nephrectomy is required. These facts emphasize the importance of early diagnosis and prompt relief of the offending obstruction.

Indiscriminate nephrectomy for hydronephrosis is not to be countenanced. Better understanding of the pathologic process, accurate diagnosis and perfection of surgical technique have made possible conservative treatment and saving the kidney in all cases of hydronephrosis due to uretero-pelvic junction obstruction except those accompanied by suppuration affecting the parenchyma or parenchymal atrophy so advanced that no substantial degree of functional recovery is possible.

The amount of actual function saved by a conservative procedure for relief of uretero-pelvic junction obstruction may be insignificant from the standpoint of the total renal function required, this being contributed almost entirely by the opposite normal kidney. From the standpoint of potential function, however, this salvaged parenchyma is of great importance, for it is capable of remarkable compensatory hypertrophy and hyperplasia with proportionate functional work. A kidney thus conserved may be capable of sustaining life in case of later total impairment or loss of the opposite kidney. Accordingly the potential function of the salvaged kidney has the same importance that attaches to the function of any kidney the object of surgical attack. By this token nephrectomy is contra-indicated in most cases of hydronephrosis just as well as it is contra-indicated in the numerous conditions for which conservative kidney operations are regularly employed as matters of course. These considerations have dictated present day conservatism in the surgical treatment of hydronephrosis.

Obstruction at the uretero-pelvic junction causing hydronephrosis occurs in various forms. Some of these are purely mechanical and positional mal-relationships and

may be said to be extrinsic. Belonging to the group of "extrinsic uretero-pelvic junction obstructions" are: lodgement of a calculus, high insertion of the ureter with valve effect, constriction by anomalous vessels, horizontal axial rotation of the kidney and nephroptosis. For the most part surgical relief of such obstruction is a comparatively simple technical problem, has given good results and has encouraged conservatism.

In other cases obstruction is due to alteration in structure of the uretero-pelvic junction in the form of narrowing amounting to stricture and may be said to be intrinsic. "Intrinsic uretero-pelvic junction obstruction" may occur as a congenital mal-formation due simply to smallness of lumen without pathologic tissue change or as an acquired condition usually the result of inflammatory infiltration. From personal observation I am tempted to believe there is a third process of stricture formation in which the original cause of obstruction is extrinsic, as in anomalous vessel obstruction, and that the kinking and pressure incident to this result in pressure atrophy amounting to true intrinsic stricture.

As contrasted with the extrinsic uretero-pelvic junction obstructions, those belonging to this group and caused by "stricture" present a much more difficult and intricate surgical problem. Relief of such obstruction by transurethral dilatation by ureteral bougies usually is not successful and almost regularly some form of plastic operation is required. The technical difficulty of plastic operations, the increased risk imposed by the time required for their performance, complications attending them and a high percentage of poor results has discouraged conservatism in this group of cases.

The determining factors in favor of conservatism by plastic operation rather than nephrectomy are:

1. Ability to relieve obstruction.
2. Presence of potential function capable of sustaining life.
3. Non-prohibitive risk attaching to the operation.
4. Absence of the opposite kidney or severe impairment of its function.

The matter to be presented in this paper deals only with hydronephrosis caused by stricture at the uretero-pelvic junction, its surgical treatment by a new method of plastic operation which I devised 14 years ago and the results obtained in 20 such operations in 19 different cases. In addition to these cases I have observed a number of cases of my associates—Dr. Donald Creevey of the University Hospital staff and my former associate, Dr. Philip Donohue—

¹ Read before the American Urological Association meeting, Minneapolis, June 28–July 1, 1937.

and have had access to the records and radiographs in them. Except for a single failure, finally requiring secondary nephrectomy, the results in these cases have been similar to my own. Accordingly a really substantial number of cases of the operation have been observed and only one secondary nephrectomy has been required. However, only my own 20 operations in 19 cases and the results secured in them are the basis of this report.

This communication, containing the first formal description of the operation I have devised, has been withheld until this time to the end of having it contain a report of "eventual end results" by which the value of the procedure may be appraised. This has not been a feature of most previous reports bearing on other plastic operations for

surgery of certain plastic principles. Their applications in the field of urology are not contributions of anything fundamentally new but represent a gradual evolution.

End to side anastomosis of viscera had been employed in various ways before application of the principle in "uretero-pyeloneostomy" by Küster in 1891 (fig. 1).

The plastic principle of transverse suture of a longitudinal incision as applied to the pylorus in the Heineke-Mikulicz operation was adopted for use at the uretero-pelvic junction by Fenger in 1892 (fig. 2).

The principle of continuous side to side union was used in plastic procedures on the skin before its application as a pyloroplasty by Finney. From this its use as a pelvio-ureteroplasty was only a natural step (fig. 3).

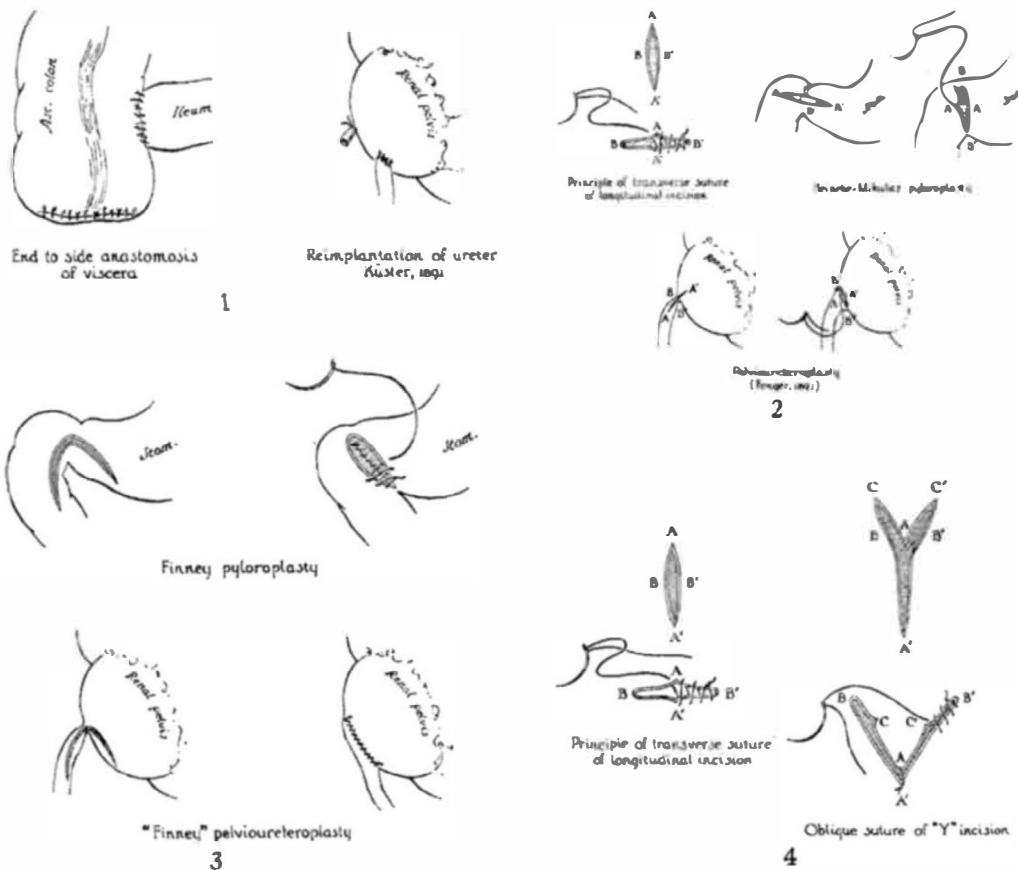


FIG. 1. Reimplantation of ureter into pelvis—"uretero-pyeloneostomy"—by Küster in 1891 was an adoption from general surgery
 FIG. 2. The plastic principle of transverse suture of a longitudinal incision as applied to the pylorus in the Heineke-Mikulicz operation was adopted from general surgery for use at the uretero-pelvic junction by Fenger in 1892.
 FIG. 3. The plastic principle of the Finney pyloroplasty was adopted from general surgery for use at the uretero-pelvic junction
 FIG. 4. The principle of the simple Y plasty differs from the Heineke-Mikulicz principle only in detail: one end of the longitudinal incision is split but essentially it consists of transverse suture of a longitudinal incision.

uretero-pelvic junction stricture. Mere description of a new procedure for this purpose unaccompanied by report of what it accomplishes as to: (1) symptomatic relief, attested by follow-up reports, (2) anatomic improvement, shown by check-up pyelograms and (3) functional improvement, demonstrated by test, is a contribution of questionable value and may be very misleading.

EVOLUTION OF PELVIO-URETEROPLASTIES

Various procedures for relief of uretero-pelvic junction stricture have been described. All of these including my own, to be described here, are adoptions from general

The operation to be described here is a combination of well recognized plastic principles including the so-called "Y plasty." The principle of the simple Y plasty differs from the Heineke-Mikulicz principle only in detail: that is to say, one end of the longitudinal incision is split but essentially it consists of transverse suture of a longitudinal incision (fig. 4).

Durante applied this simple form of Y plasty to relief of pyloric stenosis before its application to the uretero-pelvic junction by Schwyzer in 1916 (fig. 5).

Judging from published reports and from personal comment of individual experience by colleagues, the results secured with these several procedures have not been all that is to be desired. The percentage of poor symptomatic

Download English Version:

<https://daneshyari.com/en/article/5686956>

Download Persian Version:

<https://daneshyari.com/article/5686956>

[Daneshyari.com](https://daneshyari.com)